

REMARKS

Claims 1, 3-6, 8-9, 11-14, 16-17, and 19-23 are pending. Claims 1, 8, 10, 16 and 19 are amended. Claims 2, 7, 15 and 18 are canceled. No new matter is introduced.

Applicant thanks Examiner Dimyan and Primary Examiner Thompson for the courtesy of the telephonic interview on September 23, 2004 with Applicant's representative, Sumeet Magoon. During the interview, independent claims 1 and 19 were discussed with respect to U.S. Publication No. US 2002/0046386 to Skoll et al. and U.S. Patent No. 6,405,351 to Steiss et al. Applicant's representative pointed out the differences between the claimed invention and the cited references. No agreement was reached with regards to the claims. Applicant provides arguments presented during the interview as well as additional arguments below.

Applicant respectfully requests reconsideration and allowance of the present application.

On page 2 of the Office Action, claims 7, 10, 15 and 19 are objected to because of certain informalities. Specifically, claims 7 and 15 have been objected to because they recite the limitation including the terms "conflicting labels." Claim 19 is objected to because it recites the phrase "two conflicting inferred and renamed labels." The Office Action states that these claims are objected to because of insufficient antecedent basis for these limitations. Applicant traverses this objection. Claims 7 and 15 have been canceled. Therefore, the objections with respect to claims 7 and 15 are moot. With respect to independent claim 19, there exists no antecedent basis problem. Claim 19 recites, among other features, "running the connectivity tool on the copy of the artwork to identify a shortest electrical path between two conflicting inferred and renamed labels." Thus, since the phrase "conflicting inferred and renamed labels" is properly introduced for the first time in independent claim 19, there is no antecedent basis problem with respect to independent claim 19. Support for this limitation can be found in the specification at page 4, lines 9-11, for example. Since claim 19 is in proper form, Applicant respectfully requests that the objections with respect to claim 19 be withdrawn.

With respect to the objection of independent claim 10, Applicant has amended claim 10 to recite, among other features, "inferring labels to the copy of the artwork using a short locator tool." This amendment is made for clarification only and was not intended to narrow the scope of the claim. Applicant respectfully submits that the objection with respect to claim 10 has been overcome and requests that this objection be withdrawn.

On page 3 of the Office Action, claims 1, 3-6 and 10-14 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Publication No. US 2002/0046386 to Skoll et al. (hereinafter, Skoll). On page 5 of the Office Action, claims 7-9, 15-17 and 19-23 stand rejected under 35 U.S.C. § 103(a) as being un-patentable over *Skoll* in view of U.S. Patent No. 6,405,351 to Steiss et al. (hereinafter *Steiss*). These rejections are respectfully traversed.

With respect to independent claim 19, Applicant respectfully submits that the Office Action does not establish a prima facie case of obviousness as required by the MPEP. To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, finally the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP § 706.02 (j).

Applicant respectfully submits that the Office Action does not establish a prima facie case of obviousness since neither *Skoll* nor *Steiss*, either separately or in combination, disclose or suggest all of the features of the claimed invention. For example, neither *Skoll* nor *Steiss* disclose or suggest “if the short circuit exists, determining a location of the short circuit by: ...creating a copy of the artwork of the circuit; inferring and renaming labels, associated with each identified connection, in the copy of the artwork; and running the connectivity tool on the copy of the artwork to identify a shortest electrical path between two conflicting inferred and renamed labels, wherein the short circuit exists in the identified shortest electrical path” (emphasis added) as recited, among other features, in independent claim 19, as presented.

Skoll provides a design analysis workstation to facilitate the extraction of component and component interconnection information from image-mosaics captured during the deconstruction of an integrated circuit. The design analysis workstation displays a plurality of image-mosaics concurrently in respective independent mosaic-views. The mosaic-views are synchronized to display the same area of the respective image-mosaics. Design information is extracted by recreating all or parts of the components and component interconnections as schematics drawn on one or more annotation overlays displayed over one or more of the mosaic-views. See *Skoll* at para. 50.

However, *Skoll* does not disclose or suggest “creating a copy of the artwork of the circuit; inferring and renaming labels, associated with each identified connection, in the copy of the artwork” as claimed. In addition, as stated in the Office Action, *Skoll* does not disclose

or suggest "running the connectivity tool on the copy of the artwork to identify a shortest electrical path between two conflicting inferred and renamed labels, wherein the short circuit exists in the identified shortest electrical path" as recited in claim 19, among other features.

In an attempt to overcome the deficiencies of *Skoll*, the Office Action cites the *Steiss* reference. The Office Action states that since *Steiss* identifies shortest paths between nodes, that it would have been obvious to combine *Skoll* with *Steiss* to teach the identification of a shortest electrical path between two conflicting inferred and renamed labels, wherein the short circuit exists in the identified shortest electrical path, as claimed. The Applicant disagrees. To establish a prima facie case of obviousness, not only must there be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, but there must also be a reasonable expectation of success to achieve the claimed invention.

The Office Action fails to establish either of these requirements. First, the Office Action does not provide any motivation in *Skoll* to modify its teachings with the teachings of *Steiss*. The Office Action merely states that "[s]ince obtaining the shortest path between conflicting labels (for the determination of a short in a circuit) will speed up identifying shorts and making appropriate corrections in the artwork, it would therefore be obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of *Skoll* and *Steiss* to achieve the same inventions claimed herein." See Office Action, page 5. The MPEP clearly states that the teaching or suggestion to make the claimed combination or modification and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. MPEP § 2143.01. The Office Action does not identify any motivation in *Skoll* itself to make such a modification. Therefore, the Office Action fails to make a prima facie case of obviousness.

Moreover, the Office Action does not explain how the design analysis workstation of *Skoll* would be modified with a system that identifies shortest paths between nodes, as disclosed in *Steiss*, to successfully achieve the claimed invention. In other words, the Office Action fails to establish that the combination of *Skoll* and *Steiss* would disclose or suggest a method of "determining a location of the short circuit by: evaluating a schematic text file associated with the circuit to identify each connection in the circuit; creating a copy of the artwork of the circuit; inferring and renaming labels, associated with each identified

connection, in the copy of the artwork; and running the connectivity tool on the copy of the artwork to identify a shortest electrical path between two conflicting inferred and renamed labels, wherein the short circuit exists in the identified shortest electrical path” as recited in independent claim 19, among other features.

Based on the above, Applicant respectfully submits that the Office Action fails to establish a prima facie case of obviousness with respect to the claimed invention as required by MPEP § 706.02 (j). Applicants respectfully submit that independent claim 19 is patentably distinguishable over the applied art for at least the reasons indicated above and is in condition for allowance.

Claims 20-23 depend from independent claim 19. Therefore, claims 20-23 are allowable for the reasons stated above with respect to claim 19 from which they depend, and for the additional features recited therein.

With respect to independent claims 1 and 10, claims 1 and 10, as amended, recite, among other features, “obtaining a shortest path between conflicting labels in the circuit, wherein the shortest path contains the short in the circuit.” Applicant respectfully submits, as described above with respect to claim independent claim 19, that neither *Skoll* nor any other applied reference discloses or suggests at least this feature of the claimed invention.

Thus, Applicant respectfully submits that independent claims 1 and 10 are in condition for allowance for at least the reasons stated above.

Claims 3-6 and 8-9 depend from independent claim 1 and claims 11-14 and 16-17 depend from independent claim 10. Therefore, claims 3-6, 8-9, 11-14 and 16-17 are allowable for the reasons stated above with respect to the claim from which they depend, and for the additional features recited therein.

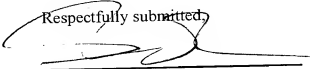
CONCLUSION

In view of the foregoing remarks, favorable reconsideration of all pending claims is requested. Applicant respectfully submits that this application is in condition for allowance and requests that a notice of allowance be issued.

Should the Examiner believe that anything further is required to expedite the prosecution of this application or further clarify the issues, the Examiner is requested to contact Applicant's attorney at the telephone number listed below.

Date: **September 30, 2004**

Respectfully submitted,



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